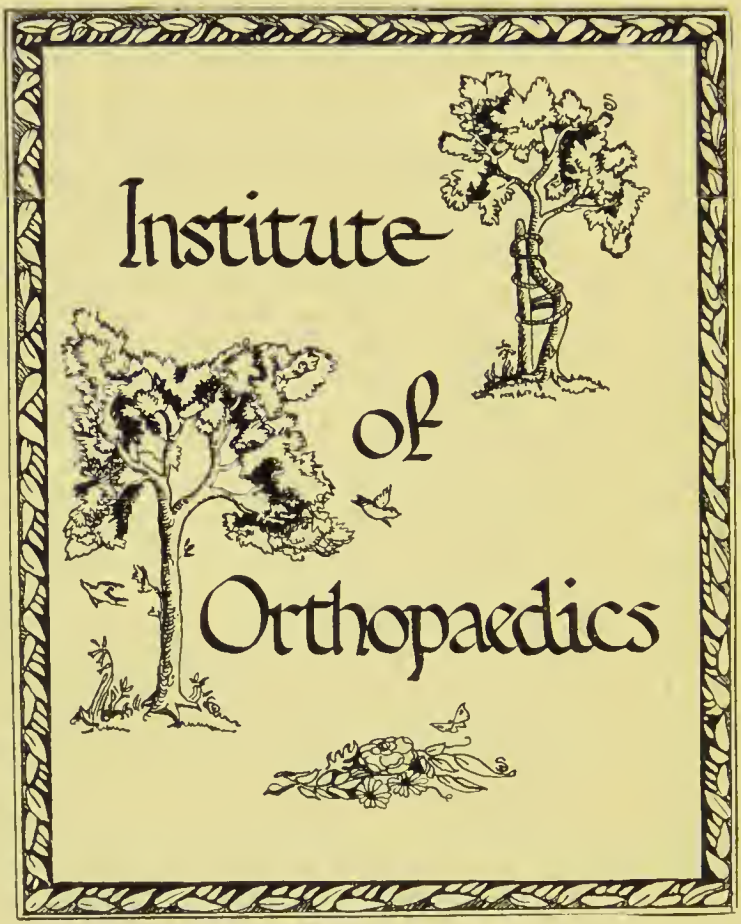
DIFFERENTIATION
IN
RHEUMATIC DISEASES
(SO CALLED)

HUGH LANE



DIFFERENTIATION IN RHEUMATIC DISEASES

(SO-CALLED)

FRONTISPIECE

RHEUMATOID ARTHRITIS IN A BOY 8 YEARS OLD.

HAYNART

DIFFERENTIATION

IN

RHEUMATIC DISEASES

(SO-CALLED)

BASED UPON COMMUNICATIONS READ BEFORE THE

ROYAL MEDICO-CHIRURGICAL ASSOCIATION, 1892

BRISTOL MEDICO-CHIRURGICAL ASSOCIATION

14TH MAY, 1890

And Reprinted from THE LANCET, *October*, 1891

BY

HUGH LANE, L.R.C.P., M.R.C.S.

SURGEON TO THE ROYAL MINERAL WATER HOSPITAL, BATH, HON. MEDICAL OFFICER TO THE ROYAL UNITED HOSPITAL, BATH

CO-AUTHOR OF "THE RHEUMATIC DISEASES SO-CALLED,"
AUTHOR OF "HYDROTHERMAL THERAPEUTICS AND VALVULAR LESIONS,"
"VALVULAR DISEASES OF THE HEART WITH SPECIAL REFERENCE TO TREATMENT BY THE BATH WATERS,"
"GENERAL HINTS ON THE USE OF THE BATHS AT BATH."

SECOND EDITION

LONDON

J. & A. CHURCHILL

11, NEW BURLINGTON STREET

1892

PREFACE.

It is now two years since the first edition of this book appeared, and that edition has been exhausted. The interval since its publication having to a great extent been occupied by further study of rheumatic and gouty diseases, I venture to hope that the presentation of the results of that study may not be unacceptable.

I cannot easily forget the exceeding kindness and cordiality with which friends, as well as critics, with whom I was personally unacquainted, received my first literary venture—a forbearance which, if the impartiality of the leading medical journals was not beyond all dispute, one would almost be tempted to attribute rather to the courtesy of the reviewer than to the merits of the reviewed. Still less am I likely to forget my

indebtedness to one whose loss is mourned not only in the city where he practised, but in the larger world of his profession—I mean Dr. Hensley, the late Senior Physician to the Royal Mineral Water Hospital. It is no mere phrase of eulogy, but a literal statement of fact to ascribe mainly to his kindness the opportunities I had, when I first came to Bath, for the successful furtherance of my inquiries concerning the diseases discussed in these pages, which his position in that institution enabled him to afford. I may therefore be pardoned for a reference of a more private nature than is usually found in a preface, if I mention that I had the sad satisfaction of faintly showing my appreciation of his worth by attending him during the last five months of his life, when he calmly and courageously awaited the issue of his unequal contest with suffering.

HUGH LANE.

11, The Circus, Bath,
March 11, 1892.

CONTENTS.

LIST OF PLATES.

DIFFERENTIATION IN RHEUMATIC DISEASES

(SO-CALLED).

"Non est vivere, sed valere, vita."

CHAPTER I.

Introduction.

The subject which we have before us is one which deserves, and indeed demands, the closest study from every member of our profession, not only on account of the virulence of these diseases, but also on account of the frequency with which they are met.

It may be regarded as a truism to say that as the empire of medical science gradually widens its bounds, some of its departments, which have in the past attracted but too scant a measure of serious notice, are only now beginning to receive the attention which is their due. Thus investi-

gation into the characteristics and pathology of chronic rheumatic diseases so-called has, it must be admitted, been neglected to a greater extent than is warrantable in the case of a disease so widespread in its occurrence, and of so serious a nature; and as in every department of human knowledge the synthetic method precedes the analytic, it is only when we pass from the stage of dealing in broad and general definitions, and arrive at that of differentiating and classifying, that we can truly say that a subject of this kind has begun to be properly grasped. In the case of chronic rheumatic diseases so-called, the time is not so very far distant when the employment of the single term "rheumatism" was held sufficient, not only as a definition, but as an explanation of numerous other diseases, which it is now found cannot be either diagnosed or cured by the device of merely comprising them all under one common term, and treating them all alike.

It has, therefore, to be kept in view in approaching the special study of rheum-

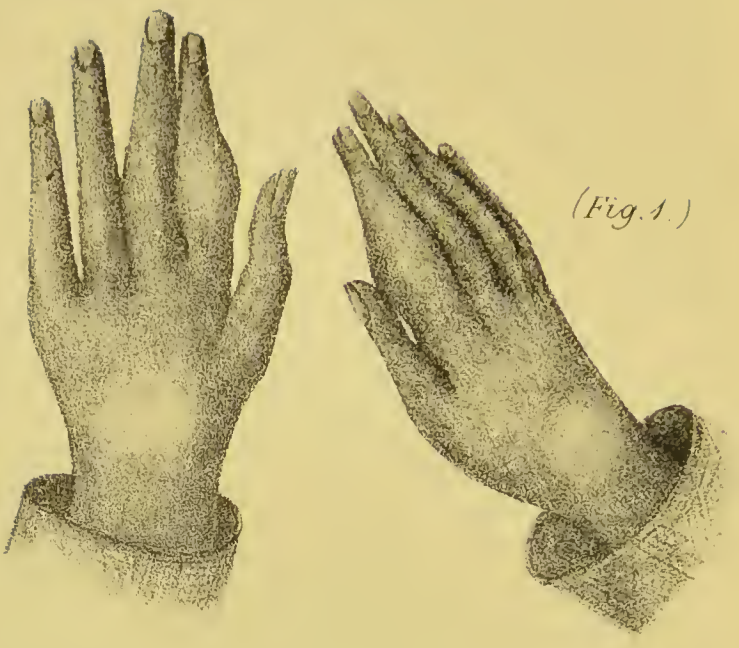
atism, that before grappling with it in its numerous and distressing forms, these must be scientifically detailed and classified by the same methods by which all scientific knowledge is reached, viz., inductive reasoning based upon extensive and minute observations.

It may seem unnecessary that I should enlarge upon the pressing need of all the investigation that can by any means be brought to bear upon one of the most universal and painful of all the physical scourges which—in spite of the advance of knowledge and civilization—still afflict so many of our fellow-creatures.

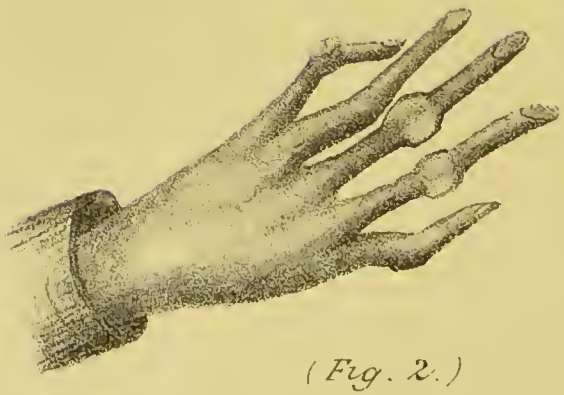
Time was, when to the old, the poor, and the overwrought, rheumatism seemed to be the natural and expected conclusion to a life of trouble, only capable of being mitigated by the warm clothing which charity might supply, or proximity to a friendly fireside. It was not provided for nor guarded against, until its presence made itself felt, for it was looked upon as "Kismet," a thing that could not be avoided,

and the idea of preventing its approach, of looking for constitutional symptoms, or, in fact, attempting anything beyond the mere alleviation of its pain—when once the victim was in its grip—was a thing unheard of. It did not then seem to be realized, that when a patient complained of pains, swollen joints, and other kindred deformities, that to say "this is rheumatism," and to prescribe some stereotyped treatment applicable to rheumatism so-called, was not to exhaust the subject, nor even to lead the way to the ultimate hope of eradicating the source and origin of the evil. But now that we are beginning to understand the true nature, indications, and treatment of its various forms, and when the conviction is forced upon us that it is because of these so many of the population around us are racked and torn with pains and deformed beyond the semblance of humanity, now we also begin to see the burden that lies upon us to relieve these victims, to make life more tolerable for them and better worth living; in fine, to demonstrate to them that

PLATE I.



(Fig. 1.)



(Fig. 2.)

PLATE I.

Chronic Rheumatoid Arthritis.

Fig. 1.

Matilda H., aged twenty-four, admitted February 20th, 1889. First noticed pain and swelling in right wrist. No marked increase until October, 1888, then pains in finger-joints; then commenced swelling, as shown in Plate, in fifth metacarpo-phalangeal joint of left hand, the proximal phalangeal articulation of right hand, and swelling over carpus in same hand.

Chronic Rheumatic Arthritis.

Fig. 2.

The left hand of Rosa C., aged thirty-three, in which a good example of chronic rheumatic arthritis is shown by the well-defined swellings over the phalangeal articulations. Deformity and emaciation are also well marked.

This patient was quite well until she had acute rheumatism two and a-half years ago. Since then the progress of the disease has been as shown.

[*To face p.* 16.

something is possible for them beyond mere physical existence, encumbered with pains and discomforts, and to teach them the truth and the meaning of that pregnant aphorism of antiquity—"non est vivere, sed valere, vita."

It will not, I trust, be looked upon as mere extravagance to say that by the increase of careful unremitting investigation into the various kinds of rheumatic diseases, especially with regard to their early and curable stages, and the marks by which they may then be recognized, a better and higher result will inevitably be reached, that in good time such symptoms and such effects will no longer be visible, and we shall no longer have amongst us the crippled frames of which I have spoken, and the lives of misery which are so often transmitted to an enfeebled posterity. This consummation so devoutly to be wished, is, I fervently believe, no mere visionary's dream of the future, but is an actuality almost at hand.

It is with such a result in view, and with

the hope that our present proceedings may in some small degree contribute to it, that I am addressing you on the subject of rheumatic diseases.

OBJECT.

Object.

The object is to endeavour to throw some further light on the doubts which exist as to what the differences are between the varieties of rheumatic disease so-called. By these I mean the diseases to which the terms chronic rheumatism, rheumatoid arthritis, rheumatic arthritis, and what is more popularly known as rheumatic gout, are applied.

Previous work.

A year ago a work on this subject appeared by myself in conjunction with Mr. Charles T. Griffiths. I feel that it is eminently an important subject, in this country at least, that the persistency of investigation should be courted, for, go to what part of the kingdom we will, we find one or other of the above-mentioned diseases to be in large proportion, as compared with almost any other in the whole practice of medicine. Although one

Important subject.

cannot hope to better, to any considerable extent, those advanced in life who are suffering from a rheumatic affection, in spite of our utmost wishes and endeavours to do so, the subject which, I think, ought to hold a greater prominence than it does is that of giving attention to the early interference in the same disease, or in one of them related to it, whether it be in a patient a little or much younger. For my experience has been that I have found that the tendency for the rheumatoidal element to develop in young persons is terribly on the increase.

In aged

and in young

on the increase.

The result of my investigations has been to convince me of the following—that there is a great difference between rheumatic and rheumatoid arthritis, and so markedly have clinical facts impressed this truth upon me, that I gladly grasp any occasion or opportunity when I can explain the results of my research.

New distinction.

Fortunately for the success of my cause, my paths have led me into regions where rheumatism, rheumatoid arthritis and rheum-

Royal Mineral Water Hospital.

atic arthritis are grouped together for special treatment. In the Royal Mineral Water Hospital, at Bath, can be seen these diseases in all their phases, and with all their distinguishing differences, at any age and in every stage.

CHAPTER II.

The Rheumatic Diseases So-called.

Our classification.

The divisions of the rheumatic diseases so-called established by Mr. Griffiths and myself are:—

Chronic rheumatism,
Chronic rheumatic arthritis,
Chronic rheumatoid arthritis.

And to these might be added

Chronic gout.

Chronic rheumatism.

The condition of chronic rheumatism is usually regarded as a most frequent one, but experience has shown that many of these cases of so-called chronic rheumatism, if inquired into more deeply, will prove to be one or other of the supposed allied diseases to be described later.

When the sciatic nerve is attacked by rheumatism we call it sciatica; when the lumbar muscles—lumbago; when certain

nerves we employ the term neuralgia; and yet all, in spite of their change of name, claim a share in their relation to chronic rheumatism. I do not mean to offer any obstacle to this arrangement; it is, in fact, by adopting this quasi-complication we carry simplification. But when the term chronic rheumatism is used, it seems to me that it could not be utilized for better or for clearer designation than in those cases *in which the joints are painful but not swollen; or in which there is a neuralgia or even arthralgia associated with myalgia, or apart from it; or in which the various fasciæ are affected; or in which there is a general neuralgic condition supervening on an attack of acute rheumatism.* This is what I prefer to call chronic rheumatism.

Definition.

Chronic rheumatic arthritis.

Chronic rheumatic arthritis is a disease in the causes of which rheumatism plays an all-important part. Rheumatoid arthritis is a disease having its origin quite independent of any rheumatic diathesis or tendency to it. It is now proposed to assert, in the first place, that rheumatic arthritis should

not be mixed up, or in any way confounded with, rheumatoid arthritis; and secondly, that it is distinctly a disease having rheumatism in some form or other for its origin.

To go to the point at once, it must be stated that chronic rheumatic arthritis (by which term I shall for the future mean an arthritis in which rheumatism has been proved to play a distinct part in its causation) is an arthritis which follows an attack of acute or subacute rheumatism, whether gradually merging into the arthritis, or happening some considerable time before the joint trouble becomes manifest. Definition.

It commences with acute, or it may be subacute, rheumatism. The subacute may be so slight as to escape the notice of the patient, in so far as the rheumatism goes. The patient recovers more or less from this attack; then, after a longer or shorter time, without any particular exacerbation, swelling in the joints begins to show itself—not necessarily, but most commonly, the joints that were affected at the time of the attack. Origin. Course.

Character of joint swellings.

These swellings, though positive enough in themselves, can be characterized by many negative signs. For instance, there is not the thickening of the capsule to the same extent as in rheumatoid arthritis, and there is no effusion; the few cases in which effusion occurs being those of rheumatic synovitis—that is, synovitis of which the only attributable cause is rheumatism. The swelling seems to be due to the intra-articular cartilages and capsules combined. When emaciation occurs, as it so frequently does in these cases, the condition of this joint deformity is very well seen (Fig. 2).

This seems to be the condition when disorganization of tissue has taken place; but when disease has occurred, and an attempt at organization has gone on, adhesions have formed, and the joints are apparently ankylosed. In these cases the swelling is still less marked, it being quite common to observe no departure from the natural size, and yet, perhaps, the joints are moulded together, producing an actual condition of synostosis (*vide* Fig. 8, Plate IV.).

Advanced condition.

Appearance of skin.

As in rheumatoid arthritis, the patients are of a worn-out appearance, with paleness of skin, and frequently much emaciation; but, on the whole, the anæmic condition is not so persistently present.

Configuration of the swelling.

The configuration of the swelling in rheumatic arthritis frequently appears as an exaggeration of the articular ends of the bones, whereas in rheumatoid arthritis the swelling is one smooth uniform shape, commencing some distance above the joint, and terminating some distance below it.

Polyarthritis common.

There is frequently more polyarthritis in rheumatic than in rheumatoid arthritis, except in the form after gonorrheal rheumatism, when monarthritis is mostly the rule.

Rheumatoid arthritis.

Rheumatoid arthritis is a disease of debility, but this debilitating cause is unknown, though occurring always in cases with a strong strumous diathesis, and often with a history of gout, but never of rheumatism (unless it be an accidental connection taking place in the lifetime of the individual, when the ravages of both

diseases can be separately and distinctly traced, and which I unhesitatingly call a "*mixed case*").

Mixed case.

Chronic gout.

Chronic gouty arthritis is an arthritis resulting from gout (Fig. 10, Plate VI.).

Diagnosis between chronic rheumatism and rheumatoid arthritis.

In speaking of the symptoms of rheumatoid arthritis, I will make reference to those symptoms which are sometimes put down as common to both rheumatism and rheumatoid arthritis.

Let us imagine two patients sitting side by side, one with chronic rheumatism and the other with rheumatoid arthritis.

Now, what do we see? In the rheumatoid arthritis case the first thing that strikes us is most probably the *pallor* of the patient, as compared with the chronic rheumatic. We look a little closer, and the next thing we perceive will most probably be the *joints*.

Pallor.

Joints.

The patient with chronic rheumatism will present in this feature little or nothing, whereas, on the other hand, the rheumatoid arthritis patient will be more or less crippled. There will be distinct *muscular*

Muscular atrophy.

atrophy in the rheumatoid arthritis case, and the *complexion* will present the *pallor* mentioned before, on closer inspection showing yellowish tinges on the face, neck, and perhaps elsewhere. Now, if we ask both patients if they ever have had *rheumatic fever*, they both will probably say no. But further inquiry will elicit the probable fact that the *family history* of the patient with rheumatism will be a good one, or perhaps at the most a rheumatic one, while the rheumatoid arthritis patient in most cases gives or shows a *strumous taint. It is upon the basis of this strumous taint that I feel we must look for further assistance to guide us in the treatment of this terribly crippling malady. It is nearly always present more or less.*

Family history.

I am aware that this strumous history has not been particularly referred to in other descriptions of the disease: it being the almost invariable accompaniment has induced me to bring the matter forward—*in fact, to look upon struma and rheumatoid arthritis as a cause and effect*, has seemed to me the one and plain characteristic of our investigations.

Strumous history.

Time does not allow of departing far afield for instances in support of the truth of this. The facts, as I have stated, have been so palpable, and the distinctions at once so clear, that perhaps it is wholly unnecessary. I would, however, make one exception and give one circumstance in support of the theory: take, for instance, the disease known as Charcot's disease. We see the condition which prevails in the joints, and on further inquiry we find a tabetic history. It is not for me to assert that the tabes and joint disease are cause and effect; although when we find a patient with a personal and family history of scrofula, struma, or tabes, suffering from an affection of the joints, in which no pre-existing attack of rheumatism can be proved, am I very wrong in believing there is such a thing as cause and effect in the case we have before us?

Charcot's disease.

In the work published by myself in conjunction with my friend, Mr. Charles T. Griffiths, "The Rheumatic Diseases so-called," based upon the careful analysis of upwards of 3,000 cases of rheumatic diseases,

The rheumatic diseases so-called.

each case being under daily observation for a period averaging about six weeks, we clearly proved that under the heading of rheumatoid arthritis are included two distinct diseases, one which we have termed *rheumatic arthritis*, a disease of rheumatic origin and possessing strong and incontestable features of its own, and the other *rheumatoid arthritis*, a disease closely allied to struma or phthisis. We have shown that these diseases are distinct enough to justify us in placing them under two separate headings, and this opinion has only been strengthened by a prolonged observation of these illnesses; and, moreover, treatment has accentuated the importance of a correct differentiation between these conditions, as will be evident to the reader later on.

I will first go through the chief distinctions already drawn by ourselves between these diseases, before entering upon the results of my researches since the publication of our work, and the results of further investigations all tend to strengthen my opinions, and, if possible, to more fully

satisfy me of the correctness of our classification.

Difference between chronic rheumatic arthritis and chronic rheumatoid arthritis.

It may be asked now—Then what is chronic rheumatism of a joint when it supervenes on an acute attack? Is it rheumatic arthritis? In the strictest sense of the term it is. But what concerns us is not so much the difference between chronic rheumatism supervening on an acute attack with little joint affection, and chronic rheumatic arthritis supervening on an acute attack of rheumatism with considerable joint implication, as the differences between chronic rheumatic arthritis and chronic rheumatoid arthritis.

What is rheumatic arthritis?

Cause.

I assert at once that the main difference is in the cause, and I shall also at once say that the main differences do not stop short at the cause.

Joints.

Character of swellings.

In these rheumatic cases we find that the characters—that the physical characters—of the joints implicated present a very considerable difference. There is frequently a flexion and fixation in the phalangeal joints, accompanied by a swelling, which ends

abruptly above and below each joint, whether in those fixed or not, which is not observable in rheumatoid arthritis; for in rheumatoid arthritis the swellings have strong inclinations to be spindle shaped—that is, graduating into the normal parts (Fig. 3). It seems a singular fact that the proximal phalangeal joints of the second fingers are the favourite ones attacked in rheumatoid arthritis, and if a monarthritis still more so is it the case. In rheumatic arthritis I have found a monarthritis more the exception than the rule.

Obscure cases.

What diagnosis are we to put upon the results of acute rheumatism coming on in a patient already suffering from a previous arthritis, which has had its origin in a more or less obscure manner? That must depend on the ultimate clinical appearances prevailing.

Heart complications.

An important consideration here presents itself. Assuming that the patient in this recent attack of acute rheumatism develops cardiac mischief, will not the effect on the progress of the resulting disease be

regulated in proportion as the cardiac lesion is severe or mild? First of all, the action of a heart more or less rendered arhythmical by endocarditis, or myocarditis, upon a case of rheumatoid arthritis. The most important thing is, perhaps, the fact that tissues, especially muscular ones, already impoverished by the causes of rheumatoid arthritis, now lose another of their sources of nutrition by obstructed blood supply—possibly there may be pulmonary congestion, or regurgitation with malaëration. That these complications in any way produce a separate and distinct pathological condition as a result of combined forces is not evident.

I do not deny that these distinctions are sometimes so ill-defined as to forbid us deciding upon an arbitrary classification—especially where we find a case of acute rheumatism occurring in a case of rheumatoid arthritis, or in which it has previously occurred. Here we often see the leading features of both rheumatic and rheumatoid arthritis displayed in the same individual,

Mixed case.

PLATE. II

(Fig.3)

(Fig.4.)

HANHART LITH.

PLATE II.

Rheumatoid Arthritis, Exhibiting the Condition of the Joints Before and After a Course of the Baths.

A. B., artist. Father died, fifty, of bronchitis; mother died, thirty-eight, of phthisis. Strong gouty history on father's side; lost a sister and two aunts, of phthisis; brother, she says, has "rheumatism," but, on questioning, evidently "rheumatoid arthritis." Five years ago she spat blood. Doctor at Bournemouth diagnosed phthisis. She went to Montreux for the winter. Lung trouble appeared to clear up; she increased in flesh; cough disappeared; and finally she returned to England apparently cured, and was able to renew her employment.

In time, continual standing at the easel developed "rheumatic pains" in the knees, and she noticed swellings in these joints and in the hands, and the general health began to fail. These symptoms went on until her work became a labour. She, following advice, came to Bath twelve weeks ago. She then presented all the usual symptoms of chronic rheumatoid arthritis; pallor; hard pulse of 108; lungs healthy, but traces of previous trouble at apex of left lung; temperature normal; skin clammy; right wrist, knuckles, left phalangeal articulations, all exhibiting the typical fusiform swellings; larger joints apparently free; complains of many neurotic sensations; headache, and tingling sensations on side of face and down both arms.

In ten weeks' time, after a course of baths, the above symptoms have disappeared; pulse 85; joints presenting appearance depicted on Plate. She is now anxious to return to her profession, which she can follow with comfort.

[*To face p.* 32.

and yet, so satisfied am I with the proof, that in these cases I hold that the patient may be suffering from both diseases distinctively; this I unhesitatingly call a "mixed case" (Fig. 6, Plate III.).

Rheumatic gout.

It may not be out of place to refer to the term "rheumatic gout," which seems to be the favourite term in some of these conditions. Could any term be more misleading when it is intended to convey the idea of a single affection? It at once suggests a combination of two separate diseases—rheumatism on the one hand, gout on the other; and yet over and over again we find a patient afflicted at any period of life, in which there has been neither the slightest history of rheumatism nor the history of gout, but yet there is no hesitation shown in at once determining the case as one of rheumatic gout. It may be excusable for a patient, especially one having no connection with the profession, to use such a term; but for the reasons just stated, does it not seem to be an extravagant departure from the plain facts of medical nomenclature?

Osteo-arthritis.

It has been my rule to speak of osteo-arthritis, not as a synonym for rheumatoid arthritis, but as an advanced condition of the latter, when bony implication has been distinct enough to merit the use of the Greek word "osteo." By bony implication I mean eburnation, osteophytic outgrowths, enlargement, flattening; in short, the later stages after the elastic swelling of the soft structures has manifested itself.*

Peripheral neuritis.

Many of the cases hitherto described as chronic rheumatism seem to be, especially in young adults, the condition more generally accepted now as *peripheral neuritis.*

Numbing of the hands, gradually disappearing as the shoulder is reached, sensations of pins and needles, and a cold appearance of the skin go with these, and yet the general health and senses may be quite unimpaired.

Treatment by baths has been most satis-

* The pathology of this condition was most carefully and skilfully investigated in an article in the "Pathological Society's Transactions" of 1886, by my brother, W. Arbuthnot Lane, M.S., F.R.C.S.

factory ; witness the case of a man aged thirty-one. No history of any hemiplegic attack, no spinal mischief could be detected, no accident, and yet the condition of his legs when admitted into hospital was most grave—semi-paraplegic inco-ordination of gait, and loss of reflexes. On discharge, two months after admission, reflexes had returned, and he expressed himself as being as well as ever, and there had been no other treatment but that employed for the usual rheumatic cases.

RHEUMATOID ARTHRITIS.

Rheumatoid arthritis.

Such is the term given to what is, perhaps, one of the most intractable, obstinate, and crippling diseases which can befall the human body.

Is rheumatoid arthritis a sequel to acute rheumatism?

Is chronic rheumatoid arthritis a sequel to acute rheumatism? Judging from some hundreds of cases which I have seen, I have not the slightest hesitation in giving a negative answer; nay, more than that, in the majority of cases, there seems to be no connection whatever.

We are taught to speak of chronic rheumatoid arthritis, osteo-arthritis, and chronic rheumatic arthritis, as one and the same disease. I have for a long time had my own views on this matter, and have quite adopted an arrangement whereby I cannot help thinking more definite clinical facts are brought forth, by using the above terms for precisely, as far as I can, the symptoms which obtain. For instance, speaking of osteo-arthritis as an arthritis in which bony mischief is the most prominent, and which is a later stage of rheumatoid arthritis; speaking of rheumatic arthritis in those cases only which have been preceded by distinct rheumatism, purposely leaving the word rheumatoid to be dealt with in the following manner:—

Author's individual opinion as to the genesis of rheumatoid arthritis.

The constitutional cause of rheumatoid arthritis is a combination of the hereditary taints of gout and phthisis.

I am inclined, after carefully considering the history of these so-called rheumatoid arthritis cases, to advance the theory—that as the debilitating and wasting disease

presents so many characters observable in a phthisical patient, and as this disease also exhibits many symptoms of chronic gout, or at least symptoms sufficiently prominent to remind the observer of the presence of these diseases, does it not seem within the bounds of reason to regard it as a disease built up by the hereditary taints of gout and phthisis, seeing that histories of one or other, or both of these complaints, have been found to be present in the majority of the patients who furnish the examples for this contribution ?

Constitutional symptoms.

Among the leading characteristic constitutional symptoms of rheumatoid arthritis may be enumerated the following :—General weakness, anæmia, emaciation, loss of appetite, arthralgia, lassitude, and the various typical neuroses, which we have minutely described elsewhere ; these, occurring frequently before any serious joint trouble has manifested itself, show that they are not dependent upon joint trouble, or even a later effect engendered by the inability to take exercise.

Onset of symptoms,

The onset of the symptoms in chronic rheumatoid arthritis is often sudden; it is not an uncommon thing to hear a sufferer express himself or herself in the following manner: "I was all right until such and such a day when I was walking along; all of a sudden I felt my knee or knees give a crack, accompanied by sudden and severe pain." I have a good example of this in a patient now under treatment, in whom the first symptom which was noticed was when walking down a hill one day, she suddenly felt one of her knees attacked by a sharp pain of a lancinating nature, which pain, however, was momentary; but it was sufficient to excite so much attention upon her part, as to make her connect the onset of her symptoms (which, in so far as chronic rheumatoid arthritis goes, are as marked as they are multiplied) with the time she first felt this pain. I may add that the patient had been under supervision before this occurrence, and has been closely watched since. It was markedly evident that chronic rheumatoid arthritis had been conspicuously

sometimes sudden.

absent until then; whereas now, and ever since the pain just referred to, it has been rife.

On the other hand, the onset of the joint symptoms may be very insidious and gradual (markedly so in the decidedly neurotic form of the disease). May be very gradual.

Much comment has been made lately, and with truth, upon the wasting of the muscles of the ball of the thumb in chronic rheumatoid arthritis. I think it might safely be still further extended to the whole of the interossei muscles, a fact which is by no means so palpable in chronic rheumatic arthritis (yet another instance upon which I base my distinction between chronic rheumatoid and chronic rheumatic arthritis). I am, of course, omitting any muscular atrophy caused by enforced idleness on the part of the patient, and am assuming that fair joint-power has been maintained. Wasting of muscles of ball of thumb.

Another important point in the list of the differences between these diseases is, that in the anæmia which accompanies chronic rheumatoid arthritis, and which is such a certain, constant, and early symptom,

Anæmia.

there is not that tendeney to chlorosis which exists in many other debilitating diseases, for it does not advanee suffieiently to assume a chlorotie tint, the inner surfaees of the eye-lids do not beeome partieularly blaneheđ, and there is not an anæmie bruit.

What change the paleness undergoes seems to be more of a brownish yellow, but this is not eommon. It has been noticed that so long as the anæmia does not progress towards the yellowish brown ehange, the skin remains of a uniform tint. But once the brownish yellow tinge is observed, it will be seen that this staining does not uniformly inerease, but presents intensity of eolour in patehes, which somewhat resemble freekles or moles (*vide* Fig. 4, Plate II.).

Age, &c.

Referring again to these differenees, I may sum up the following four attributes in one great distinetion, viz., young and old, rieh and poor, may all suffer from rheumatoid arthritis, whereas in rheumatie arthritis the young seldom do, and the rich elaim more exemption from it than the poor.

Women are more prone to the attack of chronic rheumatoid arthritis than men, and this may be accounted for on the ground of uterine troubles; anyhow, the joint symptoms as well as the other phenomena from which they suffer are more clearly defined than in the corresponding affection in men, thereby showing that a debilitating disease, in which rheumatic fever has had no voice, has produced one set of evils, whereas men, placed under like circumstances, may and do show less intensity in their cases. I mention this, not to show that there is a difference in chronic rheumatoid arthritis in men and women, but to emphasize the fact that rheumatoid arthritis is an affection of debilitation, as is proved by the foregoing fact—of women who are subjected to greater debilitation being more frequently attacked than men. All this in itself being a distinction from chronic rheumatic arthritis (*sic*), the whole of the symptoms of which are different from chronic rheumatoid arthritis, as given in my tables.

Women more prone than men.

The more one sees of chronic rheumatoid

Atmosphere.

arthritis, the more does it seem to be unaffected by change of weather; or, if so affected, producing appearances quite opposite to the generally believed symptoms. A man with chronic rheumatoid arthritis will often say he feels better on a wet day than on a fine one. It is well known that rheumatic patients suffer from the accession of wet and cold, and for the same reason rheumatic arthritis patients do the same.

I have mentioned the fact of pain coming on in joints as a first symptom, when the patient has been about his or her daily duties; I would now like to call attention to the fact that pain in the joints coming on as described is by no means the only instance of the accession of pain in a sudden and unlooked-for manner. While in bed, and towards the small hours of the morning, a sudden accession of pains will sometimes occur, sharp and lancinating, and not affecting any joint in particular; on the contrary, attacking the whole limb, giving rise to symptoms closely simulating neuralgia. The

Onset at night.

pain is often followed by severe perspiration. When this occurs, the fact of chronic rheumatoid arthritis existing admits of very little doubt. Sweatings.

The neural element, the "standard," so to speak, of chronic rheumatoid arthritis, is also strongly and emphatically marked. The rapid hard pulse, almost always over 100; the sweatings, first general and later on local, occurring periodically, and being uninfluenced particularly by change of weather, showing that it is due to nerve disturbance; the presence of continued headache, another point in the differences between these conditions, and which I think deserves notice. Neural element. Pulse.

The presence of this before any joint mischief is noticed is remarkable—not in itself remarkable, and, for purposes of diagnosis not of much avail; but when the later symptoms have manifested themselves, should the case present any difficulties of diagnosis, the recollection of *migraine* having been present will doubtless assist us, for in rheumatic arthritis we do Migraine.

not see the same constant prelude of neuralgic headache.

There are other symptoms of chronic rheumatoid arthritis which are noted by many men of distinction, which are not by any means so readily found in the rheumatic arthritis types, viz., perverted tastes, deafness, &c.; but as these do not occur, as a rule, alone, they must be taken for what they are worth, when we find them as such —but in conjunction with the foregoing symptoms, it goes a long way in establishing chronic rheumatoid arthritis as a different disease to chronic rheumatic arthritis.

Perverted taste.
Deafness.

TABLE OF DIFFERENCES.

Rheumatic Arthritis.	*Rheumatoid Arthritis.*
a. Rheumatic arthritis is a disease caused by debility, that debilitating cause being unquestionably rheumatism.	*a.* Rheumatoid arthritis also a disease occasioned by debility, this debilitating cause being unknown, but occurring always in cases with strong strumous diathesis, and often with a history of gout, but never of rheumatism (unless it be an accidental connection occurring during the lifetime of the individual, when the ravages of both diseases can be distinctly and separately traced).
b. Nervous symptoms wanting, no particular headache.	*b.* A nervous disease with many neurotic symptoms, especially early in the disease, such as sweating (local and general), tingling, numbness, formication, pigmentation of skin, &c. &c.
c. No connection with osteo-arthritis.	*c.* Last stage is osteo-arthritis, mushroom-shaped condition of joint, &c.
d. Disease more confined to joints.	*d.* Symptoms general and constitutional, joints only part of a general disease.

TABLE OF DIFFERENCES—*Continued.*

Appearance of joints differs very much in both diseases.

Rheumatic Arthritis.	*Rheumatoid Arthritis.*
e. Swelling as if solid enlargement of joint-structure, rarely any effusion, more tendency to flexion and fixation of joints. Joints most affected that were attacked in previous acute rheumatism; not so often symmetrical. Temporo-maxillary joints never affected.	*e.* Swelling typical, more or less fusiform, and with appearance of effusion. Deformity varying. Joints most used first affected; affection of joints often symmetrical; smaller joints generally affected first, running centripetally. Temporo-maxillary joint often affected.
f. Anæmia, if present, a later symptom, and never so intense.	*f.* Anæmia of a peculiar character, early and constant symptom.
g. Great tendency to subacute attacks.	*g.* No tendency to subacute attacks.
h. Heart often diseased.	*h.* Heart normal but rapid in action, a hard pulse, almost always over 100.
i. Reflexes increased, especially late in the disease.	*i.* Reflexes normal or subnormal.
j. Muscular atrophy later symptom from sheer want of use.	*j.* Museular atrophy concurrent with and often previous to joint affection; smaller muscles chiefly, but no set of muscles are free.
k. Adults, and mostly over middle age.	*k.* Any age.

TREATMENT OF CHRONIC RHEUMATOID ARTHRITIS.

It may be satisfactory for one to be able to grasp the precise condition, clinical or pathological, or both, of the cases which present the appearances we have described; but when it comes to be a question of treatment, I must confess that the success has been proportionate to that which is obtained in the treatment of struma or phthisis, a fact which may go some way to further the theory advanced by myself, of the association between these diseases and rheumatoid arthritis. In point of fact, the treatment which is adopted for the former, I have found to be the most serviceable for the latter.

Connection with struma.

While admitting that the cure of chronic rheumatoid arthritis is an accomplishment not easily to be achieved, still very much can be done to relieve the symptoms, and retard the certain progress from bad to worse which is sure to follow. Considering the intractability of this disease, we must

Often very intractable.

at once grasp the fact that "early treatment" is of the utmost consequence, but, after all, it is but second to the "preventive;" and bearing in mind the old adage that prevention is better than cure, we must understand that the cure of this complaint is often at best an uncertain one—that is, from a lasting point of view.

The Preventive Treatment.

The question may first of all well be asked—What indications am I to look for to justify me in following out the *preventive* treatment on the one hand, and the *curative* on the other? Am I to live under such restrictions as will prevent the access of the symptoms even if I be now perfectly free? And even if I have the germs of the disease upon me, and as yet they have not fully developed themselves, am I to assume that I

Invasion.

am smitten with it, and therefore the time for *preventive* is passed, and I must now

How known?

adopt the *curative?* How am I to discriminate? To such questions as these I will

(*Fig. 6.*)

PLATE III.

A Mixed Case of Rheumatoid and Rheumatic Arthritis.

Fig. 6.

Left and right hands of Charlotte M., aged twenty-four. Twelve months before an attack of acute rheumatism noticed pains in joints, with progressive emaciation and sweating of the limbs. There was no swelling of the joints until after the acute attack, then the joints presented the appearance shown, viz., swelling less definable than in rheumatic arthritis in second and third proximal phalangeal joints of left hand, same joints in first and second of right hand, and swelling over carpus in both hands.

[*To face p.* 48.

answer in the text of the foregoing description of the disease.

The treatment of chronic rheumatoid arthritis can be divided into two sections according to the results—satisfactory and unsatisfactory. Now, the grounds on which I say this are these: I have seen chronic rheumatoid arthritis in all its stages, from early youth to advanced old age, and I have come to the conclusion that to treat it with satisfaction, we must attack it as soon as the slightest sign of it appears. This seems to be becoming known now more than it used, but the apathy with which the early symptoms of this disease are regarded (owing, I believe, to the fact that these early symptoms are not grasped to the fullest extent), is mainly the cause of the dreadful ravages which it creates.

Treatment satisfactory and unsatisfactory.

What is the early stage, and how are we to diagnose with such accuracy as to be able to step in before so much mischief has been done?

What are earliest signs?

If a patient (any age) present himself or herself, complaining of lassitude and pains

in the joints, associated with the neuroses before mentioned and with rapid hard pulse, no rise in temperature, with weakness, emaciation, loss of appetite and colour, which cannot be accounted for on the grounds of personal pulmonary phthisis—the family history being phthisical—then it is time not only to be on our guard, but to commence treatment *ab initio*.

Early signs.

So the cases which call for the *preventive* treatment are those which show signs of "poorness of blood," evidenced by pallor, shortness of breath, palpitation of the heart, rapid hard pulse, the various neuroses already described, and an ever-increasing tendency to prostration on any exertion. These must be combated at once, and by successful treatment leading to a healthy condition (a circumstance by no means difficult if appropriate medicines be employed), the one great *preventive* treatment is attained.

Alliance with phthisis.

The child of consumptive or strumous parents must not be allowed "to grow himself out of it," much less must he be subjected to the very doubtful process of hard-

ening. If he eatches cold the eold must be treated; if he injures himself the injury must have due attention bestowed upon it; if he reeeives a shoek—sudden or prolonged—the treatment for sueh eases must be enforeed; in short, any eircumstance whieh happens to a patient who has a strumous or eonsumptive history must be *treated*, aeeording to the diseretion of domestie remedies on the one hand, and professional on the other; diserimination is easily obtained, but, above all, due regard must be exereised.

Dietary.

On the subjeet of dietary in the *preventive* treatment of rheumatoid arthritis, the adviee usually bestowed on the strumous and eonsumptive holds good for it also; all the nourishing food and drinks whieh ean be assimilated without giving rise to dyspeptie and bilious symptoms, should be given. Here, I think, is a good and proper plaee to mention the great differenee between the dietetie preventive treatment of rheumatism and of rheumatoid arthritis; in the former it is advisable to refrain from nitrogenous artieles of diet—sugar, beer, porter, stout, &e.

—but in the latter there seems no indication for their interdiction; rather the reverse, in fact, the diet should be *generous* in the preventive treatment of rheumatoid arthritis, but discrimination should be exercised more in rheumatism. In not following out this system I feel convinced that much harm is done: *the idea that rheumatism plays a part*, and is treated accordingly, exerts to an enormous degree a very baneful effect in cases of rheumatoid arthritis.

Medicines.

Medicines should be given to counteract the *tendencies* to rheumatoid arthritis—in other words, treat the *cause* and not the effect. Let the strumous and anæmic and the wasted (for these represent the bulk of the causes) adopt the practice of taking cod-liver oil in the winter, and steel wine or some preparation of iron during the summer, and the immense amount of benefit which will accrue will be evident in most cases.

Before leaving the preventive treatment of rheumatoid arthritis, I would call attention to the benefits which are to be derived from a sea voyage, taken under much the

Sea voyage.

same conditions as those which are taken in cases of phthisis. I therefore urge that, if possible, a sea voyage is to be taken, above all when the history of phthisis is plainly marked. Far from recommending the sea air in a general way, I would only do so in the very earliest stage, before the local symptoms had developed. I feel confident that in advanced cases considerable caution ought to be exercised before advising residence at the sea-side, for I have seen that benefit has not accrued even to those whose condition at one time seemed to point to their deriving much good from such a course, as they have come back and been readmitted into hospital infinitely worse than when they left.

Sea-side early in disease, but *not* late.

The Curative Treatment of Chronic Rheumatoid Arthritis.

It will readily be seen that it is somewhat a difficult matter to sharply separate a preventive system of treatment from that which has to be adopted when the early symptoms

of the disease manifest themselves; and it is not at all necessary or advisable that there should be any line of demarcation, for if the case has drifted on to the condition where prevention can no longer be anticipated, the treatment of the established disease is precisely the same, in so far as the foregoing is considered.

The state of affairs, however, where unmistakable symptoms have shown themselves is such that a more energetic and precise treatment is called for. Let the foregoing remarks on prevention in reference to diet be carried out, and let the patient be careful how he exercises his limbs and joints, but *especially those joints* which have now become affected. Let him avoid any occupation which involves extra wear and tear, or extra exertion to the affected joint, let him bear in mind that *a little exercise is a good thing, but an exercise involving fatigue is bad.*

Exercise of joints.

In the first place, what amount of exercise and what amount of passive movement are desirable? It is a difficult question to

answer, or rather I would say, not so difficult to answer as to carry out. To hit the happy medium whereby the patient may take just sufficient rest as will enable him to save wearying his joints, and, on the other hand, just sufficient exercise and movement of the joints as to prevent the formation of those various impedimenta to free movement, are points which require the utmost care and discrimination on the patient's part as can well be employed. This "via media" must be impressed upon the patient above all things: he must use his own discretion, he must obey whenever the pain from protracted use bids him rest, or when from protracted rest an undue stiffness shows itself. Of course, in those cases which are clearly aggravated by an employment which, for obvious reasons, they are bound to follow, the greater the rest (as a rule) the greater the relief; yet still even here a sharp look out must be kept for a condition of commencing ankylosis, or the state approaching to it.*

Via media.

Rest.

* Dr. Shingleton Smith, the Senior Physician to

Means of obtaining rest.

Rest may be effected in various ways, but the best that can be obtained is by suspension of the employment where possible. Other forms of rest or adjuvants to rest are recognized in the form of plasters, strapping, and artificial supports in general use, with or without the help of the various medicaments met with in conjunction with these.

Diet, &c.

Now must be more than ever borne in mind that the patient is not suffering from a disease which, like rheumatism, calls for a non-nitrogenous diet, or, like gout, calls for a depleting diet, but he must live well; he is now suffering from a complaint which is by no means confined to the joints, although the greatest evidence of mischief seems centred there.

Local applications.

As regards local application, nothing does so well as the iodine paint, but applied

the Bristol Royal Infirmary, has kindly drawn my attention to a particularly illustrative case of this, occurring in a seamstress, whose joints grew more painful as the week advanced, but on the Monday morning after the Sunday's rest the pain was less, though the stiffness was somewhat increased.

in bands completely surrounding the joint. The form of iodine most successful in its results is a pigment, made double the strength of the tincture. If there be much pain in the joint let there be added a little of the extract of belladonna, made into a creamy consistence by admixture with the iodine. If the joint trouble has become very chronic, the application of the unguentum oleo-resinæ of the British Pharmacopœia is most useful, or strapping with the emplast. ammon. cum hydrarg. If there is much weakness, strap from some distance below the joint to a point some distance above it. If there is effusion as well as thickening, some form of vesication, applied a short distance away, will frequently give much relief, or strapping with or without the liniment of iodide of potash with soap. But the most important local treatment that we can employ is that of passive motion, steadily and methodically persevered in, where the joint is becoming progressively stiffened. What answers fairly well here is a gentle course of gymnastics, pulleys, dumb

Iodine.

If painful.

If very chronic.

If weakness.

If effusion.

When stiffened.

Passive motion.

bells, elastic bands with handles, all of which are of the greatest service, if undertaken short of fatigue.

Massage friction.

As regards the local treatment, the occasional adoption of the frequent but gentle application of massage, or of friction over the limb affected, which will take in joint and nerve and muscle in its application, will all tend to act by stimulating locally the circulation, and must benefit by improving the vitiated vitality of the joint structures.

Inflammatory adhesions.

When inflammatory adhesions have formed, the question of passive movement has, I have found, been better answered by somewhat more forcible means than have hitherto been laid down, viz., that of forcible extension and flexion; and where the adhesions have been so firm as to produce the condition known as fibrous ankylosis, I have found the same treatment equally satisfactory. Cases have passed through my hands which have presented themselves to me with knees flexed, bringing the legs nearly to right angles with the thighs,

Fibrous ankylosis.

whieh under ehloroform have been forcibly extended, treated in the orthodox way with ice-bag and splint for the course of a few days, whieh have put the patient in a position in which he or she has been able to exereise his or her loeomotive powers, instead of passing day after day and week after week a miserable bedridden eripple.

Hip affections.

In treatment of hip affections in this disease, partieular attention might be given to what I have found of mueh benefit, and that is the treatment by eounter-irritation. A blister applied behind the great trochanter has often produeed marked benefit, so marked a benefit as to induce the patient to elamour for a repetition of the application.

Disappointments have been many, it is true, and often have I found that what appeared to be of singularly benefieial effect in one patient, if the same treatment has been pursued in what appeared to be a parallel ease, no impression whatever has been made upon its progress.

Depletion condemned.

In treating this disease, perhaps the strongest word of caution should be uttered,

nay, more, a word of eommand should be given, in treating these eases, loeally, *not to deplete.* There may be an aggravation of the pain, and there may be swelling and inflammation, and the idea of leeches or some other depletory measure may be promulgated; on *no* eondition should they be employed for the reason before mentioned,—we have a disease to deal with whose main eause has been a lowered condition of system.

It is of the greatest importanee, I eonsider, to be eareful in sifting out true ehronie rheumatoid arthritis from the various other diseases whieh are so often deseribed as allied to it, and here we have in the treatment preeisely the opposite plan to go upon from what we have, let us say, in gout; in gout we must deplete, in ehronie rheumatoid arthritis we must stimulate, strengthen, and build up.

Internal Treatment.

Medicinal. Cod-liver oil.

Of the medieines given internally whieh exert benefit, eod-liver oil must be looked

upon as the sheet-anchor ; * given in small doses at first, it must be pushed until the patient takes as much as the stomach will tolerate.

One consideration in the treatment of the disease is the advisability of the administration of iron. I have said that the mucous membranes are not particularly blanched in proportion to the anæmia present ; it seems to me, upon careful consideration, and upon the observation of the action of iron in many of these cases of rheumatoid arthritis, that when the blanching of the mucous membranes is more pronounced, the patient appears to bear the administration of iron better and with more satisfactory results. But in those few patients who do not take kindly to the drug, I have found that if one of the less astringent forms be employed in conjunction with a salt, such as the iodide

Iron.

Mode of administration.

* Cod-liver oil gained its first reputation in rheumatism (by this, of course, was also meant rheumatoid arthritis), and was known as Queen Anne's cure for rheumatism, long before its use was thought of in phthisis.

of sodium, or phosphate of lime, or if it be given in the form of a pill it is much better borne. These, or arsenic, or the tincture of iodine, if given in association with cod-liver oil, seem to have a totally different but increased beneficial action.

Arsenic.

Iron and arsenic are drugs from which good results may be anticipated, and given in combination with an iodide seem still better. For some considerable time let the patient take them with the iodide of sodium, or, better still, the syrupus ferri iodidi; I say for some considerable time, for it is only by so doing that anything like amendment can be expected.

Alcohol.

As regards the question of alcohol, there seems no indication for stopping it completely; in fact, a little seems advantageous. I have tried the effect in cases which seemed to be as near resembling one another as possible, first without any alcoholic stimulant, then with a fair amount, and again with little, with the result that there seems to be no appreciable difference. The inference to be drawn from this, I think, is, that

the advisability of giving alcohol in small quantities is more to be entertained than the total withdrawal of it, especially in those individuals whose dietary has been one in which a little alcohol has always taken a place; and, above all, in those cases where the "want" of it is complained of when withdrawn.

Warm clothing.

It may be superfluous to add that proper clothing should not be forgotten; for example, flannel or woollen clothing. All garments should be of a woollen texture, if possible—thin for the summer, thick for the winter—and at all times and in all seasons an equable temperature of the body should be aimed at; in other words, the weather should be "dodged." After all, this preventive treatment of rheumatoid arthritis, and, in fact, all rheumatic complaints, is but an appeal to common sense and the laws of nature.

Electricity.

It will be expected, in discussing the treatment of this disease, that some mention will be made of electricity. To state in anything like a precise manner what

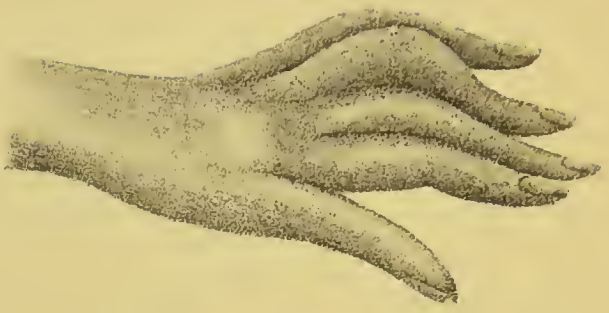
class of cases most improve by this agent would be very difficult, but, on the whole, it seems to exert most benefit where there are more constitutional than local symptoms. This somewhat bears out the theory of the neural elements in the production of this disease.

Electric bath.

The electric bath in such cases is productive of some very good results; the patient is placed in a bath with the appropriate accompaniments of nerve conduction and supports, &c. The water should be about 99° F.; the negative pole is to be placed at the foot of the bath, and the positive at the head, the current (which must be the constant one) is turned on for about ten minutes, at first slight, and then increasing, and ultimately diminishing.

Mineral water treatment.

The treatment which, for obvious reasons, I have seen carried out with most marked effect has, of course, been that by mineral thermal water, with or without massage. I am bound to admit that in about 1,000 cases of rheumatoid arthritis I have observed during the last six years, subjected



(*Fig. 7.*)

(*Fig. 8.*)

PLATE IV.

Rheumatoid Arthritis, showing Ulnar Tendency.

Fig. 7.

Right and left hands of Ann S., aged fifty-two. She first noticed pains in wrists when wringing clothes; has never had acute rheumatism. Well-marked rheumatoidal changes seen in metacarpo-phalangeal articulations (first and second) of right hand, and in ring finger proximal articulation in left hand.

Showing Typical Contractions in Rheumatic Arthritis.

Fig. 8.

Right and left hands of Margaret M., aged thirty-seven; acute rheumatism twice. When seventeen years of age fingers at once assumed flexed and ankylosed condition, as depicted. This may be well regarded as an advanced condition of rheumatic arthritis, although the swelling and deformity appeared much about the same time.

[*To face p.* 64.

to this treatment, with and without medicinal help, the cases much better and greatly relieved amounted to nearly eleven-twelfths of the whole.

Therefore, I can conscientiously say that the treatment of this intractable disease by mineral water thermal baths is, on the whole, satisfactory; but you must know your case before recommending him to this treatment.

As *first aid* very good,

To put it upon as broad a basis as possible, and to bring it within limits of intelligibility, I may say that in early treatment it is most effective, but as a "last aid" it is well-nigh useless—nay, in advanced cases may be positively harmful.

but as *last aid* useless.

How many of these, having tried every available medicine, domestic and otherwise, and after having wasted time for years, fly to the different Spas, hoping and believing they will at last get relief, only to find they have come too late?

Advanced cases.

In the advanced cases, especially where there is much emaciation and wasting, both physically, mentally, neurally, and consti-

tutionally, I repeat this treatment is to be much condemned; but where there are not these, and where the disease is evidently comparatively early, then I would as strongly advocate it; it is for the medical adviser to decide which are the suitable cases for the mineral water treatment or for change of air.

I feel confident that I shall not be making a wrong statement, when I say that much doubt is present in the minds of those suffering from chronic rheumatoid arthritis as to what Spa they should resort to, to gain the greatest benefit.

Choice of Spa.

After the remarks just made on this particular disease, it will be apparent that much care ought to be exercised in the selection of a suitable watering place. We have seen how prominently debility shows up; we have seen how the disease bears a resemblance first to this complaint, then to that; it remains therefore to ascertain what is the nearest possible correct prevailing condition of our patient, in order that we may find a mineral water which has

that product which will be best to cope with it.

It seems to have taken a firm hold upon the public, that, if a patient be suffering from a disease which they think is rheumatism, which they are told is rheumatism, or which has some connection with rheumatism, a course of mineral waters is the orthodox treatment to adopt. But the public mind does not differentiate sufficiently, not only between different diseases, but even between varieties of the same. It thinks that, if a treatment is good for a certain disease in one of its stages, it holds good for a more advanced condition of the same. Here I do not hesitate to relieve the public mind of what I must candidly say I consider an error, and give this reason: the saline water of one Spa will in many cases work great good; after a time the particular disorder may return, and from various reasons, perhaps, the patient is deterred from availing himself of the same treatment as formerly, and he lets his case run on, until he is in a condition in which

Public opinion often wrong.

debility plays a by no means insignificant part. Now I say that before resorting to his former plan of treatment, he should carefully consider, acting under medical orders, whether this disorder, *plus* debility, could not be better treated at a Spa where the chemical ingredients are present in a different form, or at least in different proportions, and which might therefore meet the requirements of his case better..

It is a most common thing to hear that a patient derived so much good from a stay at such and such a place, that he always goes there when he feels a return coming on. I repeat that I consider this a mistake, as I think is clearly proved by the example given above.

Now, in the disease chronic rheumatoid arthritis, the care of selecting suitable mineral waters is of paramount importance, and I wish to dwell a little upon its consideration. In this country the Spas which are most frequently patronized for this disease are Buxton, Harrogate, and Bath.

Buxton, Harrogate, Bath.

It is not my intention to draw any comparisons between these various Spas; but since the subject under consideration is chronic rheumatoid arthritis, the statement must at once be made that Bath and Buxton are the two most suitable ones, for the great reason that at these places the waters are used more externally, and that this bathing is supplemented by the waters being taken internally as well. Chronic rheumatoid arthritis being a local as well as a general or constitutional disease, is thus met at all points.

I will not attempt to say which of these two Spas is to be recommended before the other. That is a point that must be decided by the medical adviser when he has borne in mind the exact condition of his patient, and the fact that Buxton is situated about 900 feet above sea level, bracing, temperature rather variable, somewhat above average rainfall, but a good drying soil; whereas, on the other hand, Bath lies low, and is relaxing.

The constituents of the waters are some-

Constituents of the waters.

what similar, but it should be remembered that the proportion of solids in the waters of Bath is much greater than in those of Buxton, and the temperature of the latter considerably lower than that of the former.

Sea air.

An important question, often asked by patients suffering from rheumatoid arthritis, is—Do you recommend sea air by way of treatment?

I must candidly say that, on the whole, *sea-side treatment is disappointing.*

There is no place in England or Wales to which I could conscientiously advise any patient to go for this purpose; but to this I would, perhaps, add one exception, and that is Weston-super-Mare, in Somersetshire.

Weston-super-Mare.

The peculiarity of this sea-side resort is that the sea recedes so far at low tide that an immense tract of beach (in reality mud) is left exposed, and such is the nature of things that there is a large proportion of iodine deposited, which can be readily detected by its aroma. For my part, I have found the iodine treatment (and its associated medicaments) about the only medicine

of any avail in rheumatoid arthritis, and, therefore, I am strongly disposed to believe that the deposit on the shore of Weston-super-Mare is one of those unacknowledged and unknown blessings which have to be experienced to be appreciated. Fortunately, again, the situation of this place is well adapted to this illness, having a western aspect and a semi-circular bay in which warmth, combined with a bracing atmosphere, can nearly always be experienced. Although it may not always be possible to forecast the results of a sojourn at any Spa, still, if with the knowledge and experience at our command, we are consulted, we may say that this treatment in the early stages would most probably be found beneficial, but if advanced, doubtful.

TREATMENT OF RHEUMATIC ARTHRITIS.

This must be carried on in proportion as the amount of rheumatism is or has been present.

Contractions.

The contractions which are most frequent in rheumatic arthritis, and especially where

the phalangeal joints are concerned, can be treated much on the same lines by local interference as they are in rheumatoid arthritis.

The most troublesome results of rheumatic arthritis are seen in the extreme flexions which the joints—especially the small ones—sometimes undergo. Not so much associated with pain, and sometimes devoid of any swelling; in fact, the greater the flexion, and the firmer the fixation in that position, the less the joints are enlarged (*see* Fig. 8, Plate IV.).

Break-down adhesions.

Does there exist sufficient ground for discountenancing operative treatment? I think not.

I have seen these cases frequently treated by manipulative force under chloroform—broken down and straightened—with most excellent results.

From what has been said it will be readily understood that if a patient presents himself suffering from heart disease, the presumption is that the case is more probably a rheumatic one than a rheumatoidal.

Heart complications.

Take a case emaciated with rheumatic arthritis, then take a case of severe cardiac obstruction, in which the tissues simply are becoming starved for want of nourishment, which good blood supply only can produce. Imagine these *two* serious troubles occurring in the same individual, and must not every attention be given to attempt to mitigate one or other or both?

The best method of treating such cases of rheumatic arthritis when cardiac complications show themselves, is as a heart case, in an orthodox (but strictly orthodox) way.

Subacute attacks.

Though not wishing to dwell unnecessarily on what might be considered the acknowledged treatment of this disease, I would mention that when acute or subacute attacks arise, as they often do,—thereby revealing the existence of rheumatism, and declaring its connection with rheumatic arthritis,—the administration of salicin and salicylate of soda will nearly always be followed by benefit. The advisability of interfering at once is of paramount importance, for it is

to these repeated attacks that the ultimate crippling is due.

Climate. In the treatment of chronic rheumatic arthritis the question of climate can be definitely settled; a warm dry climate is

Diet, &c. best. As to diet, avoid as much as possible sugar, meat, and alcohol. *Voilà tout!*

Anti-rheumatic medication is well known.

Anti-rheumatic medication. In a prolonged observation of the action of various drugs in this illness, I have at last arrived at a combination from which I have had the happiest results, and which can be procured, made up in tabloid form, from Messrs. Burroughs & Wellcome, of London.

This consists of—

Formula.

Sulphur. precip.	gr. ij.
Salicylate of quinine ...	gr. $\frac{1}{3}$.
Benzoate of lithia	gr. iij.
Saccharin, &c....	100.

Five to seven of these taken every morning, and persevered in for some length of time, hardly ever fail to produce more or less good results.

The following may interest, being a prescription found of such service among the pensioners at Chelsea Hospital that the late Lord Anson gave £300 for liberty to give publicity to it:— Chelsea pensioners preseription.

Take 1 lb. of honey,
1 oz. of sulphur,
1 oz. cream of tartar,
¼ oz. rhubarb,
1 dram gum guaiacum,
1 nutmeg.
Mix.

The invalid took two tablespoonsful in a small tumbler of hot white wine and water when going to bed, and the same quantity before rising in the morning (if perspiration was occasioned, he remained in bed till it had subsided), and continued the course till a perceptibly good effect had ensued, and then only took one teaspoonful until the whole quantity was used. No precaution was considered requisite, except to avoid damp and cold and ardent spirits.

How the mineral waters of Bath improve Bath treatment.

the tone of the patient hæmatinically, and how they neutralize any stored up deleterious matter; how the tissues are washed thoroughly by an alkaline bath; how, by the internal use of the Bath waters, the blood is washed and its alkalinity maintained; and how medicines such as I have mentioned are effective, and seem to exert almost specific influence in rheumatic arthritis, are facts which are happily becoming more known.

But how patients do not repair to Bath in the early stages of the disease; and how unfairly many of them, even when they do come, treat themselves, and the Bath waters too, by taking just sufficient baths to make them acquainted with the mode of bathing, are facts which are as regrettable as they are true; especially when they draw the conclusion that they will derive just as much good by having ordinary warm baths at home, because they have not stayed long enough to see for themselves the good which would almost, without fail, show itself in appropriate cases. These may be summed up by

saying that they should repair to Bath in the very early stages of the disease.

The after results in all cases will be decided, to no inconsiderable extent, by the mode of life which the patient pursues; and, unfortunately, many of the cases from which I have derived so much valuable and interesting information, satisfactorily as they may have been turned out of hospital at one time, have appeared some months later suffering from an aggravation of the symptoms, often so clear as to show that only over-fatigue has been incurred, and often that there has been a forced disregard, or a self-imposed disregard of rule; but at the same time it must be allowed that necessity has compelled them sometimes to pursue avocations unconducive to a more satisfactory state of health. After results.

All will admit that this is not a fatal disease, and all must admit that the facilities for gaining information of pathological importance are difficult; but if clinical material is plentiful, and if facilities for treatment are at hand, it must also be

admitted that we have gained at least two-thirds of the battle.

TREATMENT OF MIXED CASES.

Mixed cases.

Rheumatism, however, may coexist with rheumatoid arthritis. I do not deny this at all. I have devoted attention to this, and call them "mixed cases." They must be seen and sifted by the skilled observer, who will discern what proportion of the one complaint exists, and adopt his treatment accordingly. A mixed treatment is indicated—in short, that element which prevails must be combated by that particular style of treatment which I have shown to be the most beneficial.

TREATMENT OF CHRONIC RHEUMATISM.

Young adults.

In young adults, in whom there are few symptoms evident, tonic treatment of a mild character will in most cases prove beneficial, without any particular anti-rheumatic medication.

Medicinal.

The syrup of the iodide of iron and cod-liver oil will be of the best kind, especially if there is any history of a debilitating complication. These cases are eminently suitable for a moderate course of thermal water treatment, such as Bath affords.

Other medicinal agents, especially the ammonio-citrate of iron, act most beneficially, in conjunction or not with the mineral water treatment just mentioned. Galvanism on alternate days with bathing (every other day for a bath being sufficient), and massage of those parts where pain is distinctly pronounced, will be found to be highly serviceable.

Sciatica.

We are taught to call rheumatism, when attacking the sciatic nerve, sciatica; perhaps, then, no fuller apology need be given for paying some attention to this distressing complaint. I say distressing, for the fact that young patients, to all other appearances strong and well, are utterly crippled by this affection, is sufficient to prompt me to make some observations on this form of rheumatism.

Symptoms. The symptoms of sciatica are well known, and require little from me by way of com-

Treatment. ment. The question of treatment seems, however, of paramount importance. Blisters, hypodermic injections, lotions, liniments, nerve-stretching, and internal medication, are all tried, sometimes together, sometimes apart, with various degrees of success.

The most satisfactory method of treatment

Acupuncture. in my hands has been that of acupuncture.

Three, four, five, or even more needles, about two and a-half inches long, plunged into the thigh down to the affected nerve, have over and over again been the means of relieving a neuralgia when all other applications have failed.

Patients, after two or three experiences of acupuncture needles, have begged for a repetition of their use, with the result that they have at length derived that immunity from pain which they day after day craved for.

Lasting effect. The great feature of this treatment is the permanency of the good results obtained. As regards medicinal treatment, chloride of

PLATE V

PLATE V.

THIS PLATE ILLUSTRATES THE DEFORMITIES OF A "MIXED CASE" OF RHEUMATOID AND RHEUMATIC ARTHRITIS.

The hands of Alfred P., 4, Allen's Ward. Twelve years previously patient developed rheumatoid arthritis in several joints in each hand. This went on without much change for two years, when he got an attack of acute rheumatism, after which the joints gradually assumed the appearance shown.

[*To face p.* 80.

ammonium in large doses certainly is most efficacious—in many cases, twenty, twenty-five, or even thirty grains, three times a day—and seems to be the only drug which exerts anything like a specific action on the pain. Medicinal treatment.

Of course, when the sciatica appears due to a general low tone of constitution, associated or not with anæmia, the usual tonic treatment can be added at discretion.

Tincture of iodine, painted along the whole of the nerve, is sometimes of great benefit. Shampooing, with a course of hot mineral baths, in those in whom the rheumatic taint is plainly evident, is especially serviceable.

The question of treatment of chronic rheumatism has for many years been divided between medicinal on the one hand, and residence at a Spa, for purposes of bathing, on the other; but a combination of the two seems now to be that which is productive of the best results. A few words on these respectively will here, I think, be relevant. General treatment of chronic rheumatism.

No cases do so well in Bath as the younger subjects, who, having recovered Young subjects.

from an attack of acute rheumatism, are left with tender and painful, but not swollen joints, or with constant neuralgic pains, which, not giving rise to much annoyance or inconvenience during the day, become worse, sometimes almost unbearable, at night, especially in bed. These are the cases which, happening in youth, will sometimes become completely cured by an average course of thermal water treatment. I say an average course, for, beneficial though the system of bathing proves, yet for the young or those in early adult life, the atmospheric condition of Bath is not one which can be recommended for a longer time than four to six weeks.

Patients in advanced life.

But for those in advanced life, where we see the form of senile rheumatism, the climate seems well adapted, and the stay need not be hurried over; yet in the old a limited number of baths is desirable.

Baths only in the young, baths combined with medicines in the old, is the summary of treatment which I think the most rational.

I feel in dismissing the subject—the treatment of chronic rheumatic diseases—

that the huge importance of the question comes before me in its most vivid form. We are told "rheumatic gout" is a most obstinate disease to manage, but why? Am I wrong in saying that it is because it is not understood? I must insist that, so long as chronic rheumatoid arthritis, chronic rheumatic arthritis, chronic rheumatism, and gout are looked upon as homogeneous (more or less), and dubbed "rheumatic gout," so long will the diseases, when they come to be treated, bid defiance to any force which is employed against them.

CHAPTER III.

Gout.

To consider this subject, let us refer to some of the ordinary manifestations which occur in gout.

Gout.

"A gouty system" is a term in which we sometimes hear a patient spoken of; by

Definition.

this, of course, is meant a system or constitution in which uric acid is prone to occur in a greater quantity than in another so less disposed.

Subject generally.

Why should this increase of uric acid take place? To this question I can perhaps find an answer which will be not far from truth when I say—because the patient's progenitor was so affected. Then the law that "like produces like" finds another example.

Genesis of gout.

To trace the disease to its origin, we

should probably find that a habit, which caused some organ to act in an unnatural way, so shaped the originator for the purpose of acting as a storehouse for uric acid, and set the whole train of symptoms to son or daughter and further generations.

Why are children exempt?

It is admitted on all hands that gout is a hereditary disease; it will also be readily conceded that gout is very rarely, if ever, seen in young children. I should like to call attention for a few moments to this subject.

If gout be a hereditary disease, is not the disease handed down to the child during its development? Granted that this is so, why does not the disease show itself earlier in life than it does?

Does not appear as *gout.*

It seems that an active life is antagonistic to a gouty development, and as children are essentially active, it is only natural to infer that their peculiar surroundings and their continuous exercise act in preventing the manifestation of the disease.

It seems, however, that in those some-

but as *rheumatoid arthritis.*

what rare cases of chronic rheumatoid arthritis in young children, the gouty element is of such preponderance that the character of the living is not sufficient to counteract this. This "surplus of gout" is, so to speak, acted upon by, perhaps, a strumous taint, or, at all events, by some similar diathesis producing the condition of chronic rheumatoid arthritis; for I think I have elsewhere clearly shown that the constitutional cause of rheumatoid arthritis is a combination of the hereditary taints of gout and phthisis; but real pure gout seems incapable of developing in the very young.

ACUTE GOUT.

Now let us consider an attack of acute gout. An attack of acute gout—as generally formulated—begins in the night with excruciating pains in the metatarso-phalangeal joint of the great toe, with some remission in the morning, with redness, heat and swelling of the aforesaid joint; as in the night-time the circulation becomes slow,

and everything is favourable to the deposit of any accumulation of the gouty material in the blood, or to the transudation of fluids generally into the tissues, and when the whole system is acting at its lowest pressure. If the condition of any organ be under par, and it has been put to any exceptional strain, a congestion may be set up by the collection of the gouty material, and the nature of the attack will be decided by the functions of the particular organ affected. This is, I think, of great importance, and opens up a wide field for reflection; we may be called to a case where the renal tubes have been suddenly blocked, and acute nephritis setting in, this occurring in the night being the only fact to show that it is gout; undigested food giving rise to acute gastritis, and so on.

Usual manner of appearing.

As a rule, the diagnosis of acute gout is easy.

Diagnosis.

RETROCEDENT GOUT.

If the gouty diathesis attack an internal organ, either in preference to a joint, or

Manner of retrocession.

after affecting a joint or joints, we say it is retrocedent gout, and the necessity for giving immediate relief becomes paramount. Why an internal organ should be by preference attacked is uncertain. Cullen has said that the disease attacks the weakest part of the organism—weakest, I suppose, by reason of the accumulation of uric acid there, or weakened in its function by its presence.

Probable cause of.

Take, for example, the stomach—the internal organ most usually affected in retrocedent gout. The organ is probably subjected to a hyperæmic condition due to some nervous shock, and then follows a train of symptoms in which nausea, vomiting, pain, and cramps play most important parts; that the disease has centralized is plain.

CHRONIC GOUT.

We must bear in mind the closeness of resemblance between some of the forms of chronic rheumatism and gout.

Diagnosis.

If we watch our patient through an attack of acute gout, and have him under supervision afterwards, we are, comparatively speaking, prepared for the symptoms of chronic gout which supervene, however slight and indefinable they may prove. But without any previous knowledge of the patient when he presents himself suffering, as many do, from symptoms closely resembling some of the chronic rheumatic forms, how are we to decide upon a satisfactory diagnosis?

Early stage may be mistaken for chronic rheumatism.

In the first place, we must trust greatly to any past history of local acute attacks he may give; secondly, we must trust and place great importance upon his family history; and thirdly, we must glean what we can from the facts and appearances as they are presented to us.

The history of the patient's life, occupation, and family, are the three great factors to bear in mind, and if deposits occur the question is virtually and actually settled.

Chronic gout, let us say of a mild kind, differs from chronic rheumatism of a mild

kind in this one great particular—that whereas the former is at some time or other nearly always preceded by an acute or sub-acute attack, the latter by no means is.

Generally preceded by acute attack.

Yet here we have a case, as far as external appearances go, very difficult to distinguish from that of chronic rheumatism. How shall we distinguish? The following are some of the impressions made upon me, which, I think, will guide.

A patient suffering from chronic gout, where no joint swelling is noticeable, will point with more precision to the joint attacked—that is, he will localize the pain to that particular joint, and will not speak in such a manner as to express that there is a doubt whether it is the joint itself or in the neighbourhood of the joint.

More definite as to seat of pain.

The favourite joint, as we know, is the metatarso-phalangeal articulation; if, however, the patient be suffering simply from chronic rheumatism of the articulations, the frequency with which we hear him say that it is the "foot" he complains of, is much more marked than when he has

chronic gout, for he will then probably point to the exact joint as the seat of pain.

There is, again, a more general pain in chronic rheumatism; that is, monarthritis is not the rule. Although far from saying that monarthritis is the rule in gout, it is, at least, more so than in chronic rheumatism.

Monarthritis more usual.

The other conditions of age, sex, temperament, occupation, &c., are well known.

To take a somewhat more advanced case of the above, a case in which, let us say, the knees are affected.

More advanced cases

Although taken for example, I would pause to call attention to this fact of the knees being now attacked—a symptom of progression of the disease by larger joints being involved. What do we see on examination? Sometimes enlargement, this enlargement taking the form of the whole of the joint area, presenting roundish, ill-defined prominences of the gouty deposit in the synovial membrane (Fig. 11, Plate VII.), resembling closely chronic rheumatoid, or the more advanced form of osteo-arthritis.

may *now* be mistaken for rheumatoid arthritis.

No grating. But there is *no* grating, as would almost certainly be the case were it this affection.

No neural symptoms. Besides, the absence of neural symptoms will help to confirm the diagnosis. Of

Tophi. course if tophi exist—and they can nearly always be seen when they do—the diagnosis will admit of no further doubt (Fig. 10, Plate VI.).

Exacerbations more common. Exacerbations are far more common, as every medical man knows, in gout than in rheumatism.

TREATMENT.

Treat early. As regards early treatment in the gouty subject, I may, at the outset, say what I have already stated with regard to chronic rheumatoid arthritis, that prevention is better than cure; and here the individual has greater reasons for adopting a preventive method of treatment than the one who wishes to prevent rheumatoid arthritis, for he in all probability knows of its existence in his parents, and if it does exist, or has existed, he must take extra precautions to prevent its transmittence; a caution which

does not apply to rheumatoid arthritis, on account of the ready manner in which it is handed down from parent to child in the former, but in the latter not so.

TREATMENT OF ACUTE GOUT.

When the diagnosis of acute gout is decided, the course of treatment must be at once resolved upon, for nothing brings more "kudos" to the practitioner than being able to relieve the pain of acute gout as soon as possible.

During the attack. During the attack, citrate of lithia, in combination with the iodide of sodium and sulphate of magnesia, and some sedative, such as the succus conii, seems to be the most efficacious.

Colchicum. Colchicum, after being lauded and then condemned, and then lauded again and again condemned, still, I think, can well hold its own against most of the anti-goutic remedies. Colchicum wine, in combination with the bicarbonate of potash, carbonate of magnesia, and iodide of potash, is one, in

fact, the only "mixture" which is found in the pharmacopœia of the Royal Mineral Water Hospital at Bath. It is no uncommon thing for patients, who have had an acute attack of gout in the Hospital, to almost pray for the prescription of this to be given them on their discharge, so that they may resort to it in case of a repetition of the attack, because (to use their own words) they got over this attack more quickly with this medicine than any previous one. It is somewhat satisfactory, among all the new inventions and ever-changing fashions in prescribing, to find such an old, and to many it may seem commonplace prescription, productive of such gratifying results.

Serpentary.

I have seen much good following the administration of a now almost disused drug—serpentary. I should like to see this more frequently used in cases of gout shortly after acute attacks, as its trial has often repaid.

Prevention.

Firstly, for the prevention of gout, let the following rules be carried out: (*a*)

moderation in all meat and drink; and (*b*) pursuance of regular exercise.

Should, however, the gouty attack come on, the patient should restrict himself, as far as possible, to a light diet, and afterwards should adopt a diet in which prominence should be given to the following:—

Dietary.

Vegetables, but little meat, and then chiefly game, chicken, white fish, and a little mutton. He should avoid young meats, such as lamb and veal, also pork, pickles, sauces, and rich articles of diet generally, as well as fat and pastry.

Drinks

Drinks—lithia and potash waters (not soda water). "Hard water" should never be drunk, and all beers should be avoided, with the exception perhaps, in some few cases, of Bavarian ales, which are prepared with "soft water." Hock, Moselle, Chablis, and light claret may be taken (not any of the heavy wines); and the juice of lemons; whisky—weak and with meals. On *no* account should any of these be taken between meals.

General directions.

Rage, grief, fear, and all excitement—

especially mental worry—are strong adjuvants to gout; to these may be added sedentary occupations, exposure to cold, and irregular living. All these must be prevented.

During an attack of acute gout the patient should be enjoined strictly to avoid any interference on his own account with the medical attendant.

For instance, the patient will sometimes apply cold to the affected part with the intention of lessening the inflammation and, therefore, the pain.

Cold locally very harmful.

I need scarcely say that this proceeding, as indeed many proceedings arising in the patient's mind about treatment in acute gout, is only calculated not only not to succeed, but to expose him to a risk of great danger.

A word of caution here, I think, will not be out of place. I refer to the general idea that an acute attack of gout "does good" and clears the system; *this is a mistake*, for my investigations have shown that the greater the number of attacks of gout, the greater is the tendency of the joints to become impeded in their movements; in

An acute attack does *not* do good

PLATE V.

Fig 10

Fig 9

PLATE VI.

Rheumatoid Arthritis and Gouty Deposit on same Hand.

Fig. 9.

W. H., aged forty-five, carpenter. Father died of gout; mother, no rheumatism or gout. Two brothers; one suffers from rheumatoid arthritis. One sister; healthy. Twenty years ago got rheumatoid arthritis in left foot. Now parts affected as seen in Plate, in phalangeal joints of fingers. Right index finger, where alone the deposit of urate of soda was observed.

Chronic Gout.

Fig. 10.

T. B., aged fifty-five, coachman. Father died of old age; mother also died of old age. No brothers or sisters affected with gout or rheumatism.

[*To face p.* 96.

fact, each attack is admitted by all observers of this disease to add to other gouty deposit in and around the joint. either locally

Constitutionally, again, each attack is accompanied by such extra work and strain upon the excretory organs, that they in time become so altered and injured by successive attacks that they fail to perform their functions. In this case, where is there a better example than in the kidneys? The gouty kidney is, unfortunately, as common a derangement as any in the gouty, and for this cause alone is it so absolutely necessary for the gouty to be careful not to throw extra work upon these organs by any undue indulgence in meat or drink. or constitutionally.

The idea that acute gout comes on from living on the "pleasures of the table" is firmly fixed in the public mind, but there is much to be said qualifying this statement. Pleasures of the table.

Let the "diner-out" take his regular exercise daily, let him continue, if he likes, to satisfy his appetite as heretofore. It is not so much the "pleasures of the table" which produce gout, as the neglect shown in

Training of athletes.

carrying off their baneful effects by suitable exercise. The athlete in these days does not starve himself to bring his weight down; he feeds himself, perhaps more than when *not* training, but takes care that what is superfluous shall be converted into good substantial matter, viz., muscle. So with gout; the gouty man has failed to put in motion that machinery which is necessary for converting the results of the "pleasures of the table" into wholesome and healthy material.

TREATMENT OF RETROCEDENT GOUT.

The treatment of retrocedent gout is that of counter-irritation to the extremities, with sedatives internally—opium and ol. terebinth. seem the most reliable.

It appears as though the disease were drawn away from its new position by the treatment, bearing out the justification of the term "retrocedent."

TREATMENT OF CHRONIC GOUT.

In chronic gout great attention must

be paid to the excretory organs; too much importance cannot be attached to this. The skin must be kept well in action, by frequent ablution, general massage, or, if necessary, a hot-air bath. Here the Turkish bath is most serviceable. There should be also a free action of the bowels daily; half a tumbler of Carlsbad water on an empty stomach the first thing in the morning, or some mild acid sulphate of magnesia answers well.

Free action of skin and bowels.

Regular exercise daily should be enjoined.

Regular exercise daily.

The formula, consisting of sulphur, salicylate of quinine, and benzoate of lithia, and from which I have had such satisfactory results in chronic rheumatic arthritis, as described on page 74, will, in chronic gout, well repay a prolonged trial. This, taken every morning on an empty stomach for a protracted period, appears to exert considerable influence in the prevention and mitigation of the recurrence of attacks in chronic gout.

My formula.

In the gouty individual we find a field

for researeh, for diseussion and refleetion, almost without parallel in the study of medicine, when we consider the organs whieh ean be and are affected by it. Take, for example, the kidney, the albuminuria with all its train of evils– gouty phlebitis, nodosity, nervous affeetions, liver, heart, dyspepsia, uleers, and a host of others, in more or less relation to gout; these, perhaps, are too often treated as simple affeetions, without onee bearing in mind the gouty eonstitution which is at the baek of it all.

CHAPTER IV.

Administration of the Baths at Bath.

MINERAL THERMAL WATER TREATMENT.

Having followed closely and scrutinizingly this form of treatment for the past six years, and believing that in the not very distant future it will come much more to the front than it even does at present; and considering it not improbable but that it will supersede all other medication, I feel that time will be well spent in devoting a chapter to some remarks upon this system of treatment, and in giving the reader some few practical hints and suggestions relative to it. Mineral water treatment.

Bath now, I believe, contains a system of bathing arrangements second to none in Europe for completeness and inexhaustible apparatus for the application of its waters. Bath.

This fact, coupled with the one that it has been the scene of my labours amongst rheumatic diseases so-called, has decided me to take it as the best from which to describe baths and a system of bathing.

Springs. The mineral springs which supply these baths yield 385,000 gallons of water daily, at a temperature varying from 117° to 120° F.

Suitable diseases for treatment. The waters are beneficial in the following diseases:—Gout, subacute; rheumatoid and rheumatic arthritis; chronic rheumatism (sciatica, neuralgia); paralysis, nervous debility, mineral poisoning, eczema, and other forms of skin affections. The whole of the springs are vested in the Corporation, who have spared no pains to make them in every way conducive to the comfort and relief of the invalid, as well as the pleasure of the more healthy who indulge in the luxury of a hot or tepid bath.

Suites of baths. Private baths of every system are provided in the three large establishments—at the New Royal in Stall Street, adjoining the Grand Pumproom Hotel; the King's

and Queen's, adjoining the Grand Pump-room; and the Royal at the west end of Bath Street.

Attractions.

It is not too much to say that the attractions of Ragatz, Aix-la-Chapelle, Aix-les-Bains, Gastein, Wildbad, Ems, or Plombières, are here equalled, if not excelled.

In addition, there are the King's and Queen's Public Baths, available for ladies and gentlemen on alternate days. The tepid swimming bath at the Royal Baths, with an area of 1,400 square feet, for gentlemen only; and the ladies' swimming bath at the New Royal Baths, which has lately been greatly enlarged.

At the Royal Baths and New Royal Baths there are comfortable rooms for bathers to rest and cool in before going into the open air; and the Grand Pump-room is available for the same purpose for bathers as the King's and Queen's Baths. These rooms are provided with daily papers.

Drinking the waters

The fountains for drinking are supplied direct from the springs. The water for

the baths is supplied from the same source, but reduced to the required temperature for bathing with mineral water previously cooled by exposure to the air.

Charges. The charges for the private baths vary from 2s. 6d. to 6d., and for the swimming baths from 1s. to 6d. The charges for drinking are 2d. per glass; 1s. 6d. and 1s. per week, or 5s. per month.

General Hints for Bathing.

Rheumatism. It may be stated broadly that patients suffering from *the rheumatic diseases so-called* may bathe in the following manner: that is, on an average, *every other day*, commencing at a temperature of 97° *or* 98°, remaining in from *twelve to twenty minutes*, for a period varying from *seven to fourteen days;* the description of the patient's *sensations* being the best guide to the change from a lower to a higher temperature.

Patient's sensations. By the patient's *sensations* I mean if he should have feelings of *faintness*, *giddiness*, or *sickness*, do *not* let him resort to a higher

temperature; *on the contrary*, let him go down the scale until *comfort is produced.* Let it be impressed upon him that, although he is bathing in "mineral water," he is *not running any more risk* than if he were bathing in an ordinary hot bath at home, in so far as his personal and bodily comforts go; but at the same time let him reflect that he is benefiting by the bath, which, while it most probably improves the condition of the patient, *cannot effect any harm.*

Mineral waters generally.

Do not let it be forgotten that mineral water is a *complicated medicine*, that one constituent may do good, that another may counteract the effects of the other, in so far as action on a patient generally goes, or even prove unsuitable for the disease; that the temperature of mineral waters varies considerably at different Spas; and that at most places the time of bathing and of drinking the waters should not be left to the discretion of the patient. Yet at the same time, as I remarked before, do not let the waters frighten.

The Bath waters.

The Bath waters are *mild* in every respect

as compared with other mineral waters. In drinking them, very little flavour or difference is noticed beyond a somewhat insipidity. The so-called "*ill-effects*" of the bathing are indeed *none other* than would be produced by warm waters of any other sort.

Eruptions. It is frequently noticed that *eruptions* of various forms make their appearance during a course of the Bath waters. In most cases there is no need for alarm. It may be well to remark here that the majority of these little skin troubles are *seldom associated* with any other complication worthy of note; and that in most cases they pass away—sometimes as suddenly as they appeared.

How to bathe. There is one point about the Bath waters which recommends them, and that is, that the patient need not, as a rule, observe any particular time for using the baths. Of course, the usual precautions about bathing near a large meal should be borne in mind; but to sum up, I might say *the bath may be taken at whatever time is most convenient.*

Variety of bath. It is not my purpose to advise here whether a patient is to take this tempera-

ture or that temperature; still less would it be my purpose to state whether this case or that case is a case for massage, douche, Berthollet, or Aix-les-Bains treatment, or any of the complex apparatus which are at our disposal. The adoption of these has to be decided on when the individual wants of each case are considered.

Severe diseases require severe remedies, and it may be that we shall be called upon to bring to bear all our forces into action; but let it be remembered, that so long as benefits accrue from the mild administration —that is, without the use of the different appliances—let it not be considered for one moment that the patient would derive greater good from the employment of these several methods.

Duration of course.

I have said that the Bath waters *act mildly*, therefore they *do not act quickly*, and it is a prevailing error amongst visitors that a course of nine, eight, or seven baths, or even less, is sufficient. To get the full benefit out of the Bath waters *at least fifteen baths* should be taken, the greater or

longer period being decided by the medical attendant watching the case.

Average course.

The average beneficial number is *fifteen baths*. This cannot be laid down as an axiom, for every case is more or less different. Not only do they demand variation in their number, but they also, according to the severity of their several symptoms, demand that patients should bathe *possibly every day—probably every other day only*. It is impossible to lay down any fixed rules for bathing, for the reasons given above.

Douche.

In cases requiring *douche*, let it be borne in mind that the temperature nearly always appears higher than when it is merely poured out slowly upon the skin. I mention this as complaints have occasionally been made by patients that they have had a higher temperature of douche than that ordered medically.

Sensations during course

It seems almost a pity to hear the different remarks which patients (who come to Bath for the sake of the thermal waters) sometimes make relative to the effects produced by the action of this kind of treat-

ment upon themselves. I refer to those remarks which cast almost a slur upon their healing properties, and from no other reason than that they are *wholly unacquainted with the manner in which phenomena of improvement are produced.*

For instance, a patient will sometimes say (after having had three or four trials in bathing), "I think these baths do not agree with me; I think I shall go home." That pains and quasi-stiffness may appear in joints previously free from such is by no means an uncommon circumstance when using these waters *during the first week.* In fact, an apparent aggravation of their troubles seems to exist. Do not let him despair over what has now come to be regarded as a usual occurrence. He will find that this onset is but temporary, and I would go further and say that, I think, it *augurs well.* It seems as if the opposing forces of disease on the one hand, and its opponent on the other, had at last met for the encounter, and that the unfortunate patient was bearing the brunt of the battle.

Apparent early aggravation.

Augurs well.

Sensations and improvement after course.

In a less marked manner the truth of this "worst-at-first-and-better-afterwards-state-of-things" is exemplified in the following way:—A patient will derive good up to a certain point, say the tenth bath. From that to the sixteenth or twentieth he may remain, to all appearances, *in statu quo*. He then determines to go away, which he does. Then he finds *he begins to get rapidly better*.

What does he say? He most probably says that he is "sorry he did not leave before, as he found himself so much improved by leaving off the bath." The fact of the matter did not strike him that it was only just this fillip which had been given to him by the change of air that was necessary to start in motion all the machinery of improvement which the thermal baths and waters had fitted up for him.

It is a case of *persevere*, only renouncing the baths when they lead to positive incapacity for using them, as shown by *fainting*, *giddiness*, or *some of the more complex evidences of some latent mischief of a cardiac, cerebral, or other origin*.

CHAPTER V.

Bathing in Heart Cases.

The mineral waters of Bath, which hold so high a position in the list of Spas, are, as is generally now known, of the greatest benefit in cases of chronic rheumatic diseases, gout and its allies. Without entering into any discussion as to the suitability of the Bath waters for these, with their several complications, I would say that rheumatism, in some form or other, is the disease which is ever before the public eye when the subject of thermal water treatment is considered. That is to say, mention the fact that a patient has gone to Bath for treatment, and rheumatism, in some form or other, is the disease which at once suggests itself; but valvular disease of the heart is the trouble which is ever before the

Bathing in heart cases.

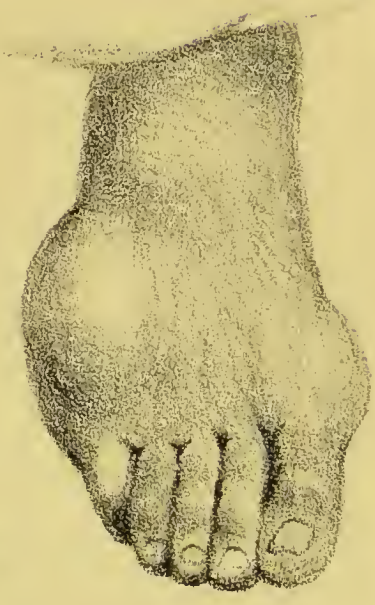
medical eye when rheumatism is spoken of, especially when acute rheumatism has been the starting point of the disease, for which the mineral waters of Bath are now recommended. Although I say, that given an attack of acute rheumatism, the medical attendant at once looks to the condition of the patient's heart, yet, for all this, there are few people who are not cognizant of the fact that rheumatic fever and heart disease are very frequently associated; and what is the result of this knowledge ?

Possessed of the knowledge that valvular disease is what he is now suffering from, he questions his doctor as to whether his heart will stand the baths. Granted the doctor gives him a reassuring answer in the highest degree, and granted that he comes to Bath, and still more granted that he sees one of the resident medical men in Bath, who sees case after case come and go vastly improved, I say this, that he approaches his first bath frequently with feelings of doubt and uncertainty, not to say commingled with fear.

PLATE VII

(Fig. 11.)

(Fig. 12.)



(Fig. 13.)

HANHART IMP

PLATE VII.

Gouty Phlebitis.

Previous History.

W. R. E., forty-three, schoolmaster. States he has had gout eighteen years. He first noticed, after a sprain, that his foot began to swell, and from that time he has always been subject to attacks of what he called rheumatism, sometimes quite suddenly—going to bed at night all right, and in the morning finding that, on account of the pain, he could not get up. This was followed by redness, heat, and swelling, and all the usual symptoms of acute gout. He first noticed deformities in knuckles, and noticed commencing deposit of chalk about three years ago in phalangeal joints of small finger. Eight years ago deposit on the outside of the plantar surface of foot showed itself.

Father had gout, but not till about thirty-five years of age. Maternal grandmother suffered much from gout.

Present Condition.

Deposits of urate of soda in terminal phalangeal articulations of all fingers except second of left hand. Deposit of urate of soda on right foot ten inches in circumference; another smaller deposit on left heel. There are deposits on both elbows, over both olecrana, about the size of walnuts, and one on the right knee immediately over the patella. There seems to be a tendency to equilateral distribution. Two years ago he thought he had "inflammation of the leaders of the thigh," but, on questioning, states there was no redness, pain, or swelling. Again, about ten months ago he had a return of this symptom. At present there is a diffuse redness all along the course of the internal saphena vein, which vessel can be felt as a hard cord-like substance. There is much pain and tenderness, rise of temperature, and furred tongue. The smaller deposit of urate of soda alluded to on the left heel is situated just below, but also bordering upon, the course of the internal saphena vein at the inner malleolus.

The symptoms subsided on rest in bed, raised position of limb, salines internally, and spongio-piline sprinkled with lotio plumbi cum opio.

[*To face p.* 112.

Now, if the case has been diagnosed as one of those forms of heart lesion, which are the most serious and the most to be taken care of, it may readily be understood how undesirable it will be to lay on additional elements of doubt and fear, and still more I would say, how equally undesirable, nay, even unjust, to depict the risks he would run of bathing in other forms of valvular disease. Yet to such an extent has the idea grown, that the Bath waters are to be used with caution in all forms of heart disease, that it is only natural that the question should have been raised whether these waters are or are not gifted with a power which they do not possess ?

"Perfectly safe."

The best advice to give a patient who will derive from the baths the utmost good for rheumatism, be it articular or be it muscular, or what not, and who has the misfortune to possess a cardiac bruit, especially one which has not led to any remote or ill effects, is to bathe at a temperature of 97 degrees Fahr., for ten minutes for the first bath.

Suitable form of bath.

I have seen some hundreds of cardiac

Never have seen an untoward result.

cases in which this method has been practised, and I have never seen a single case that showed any symptom that might be classed as even alarming.

On the contrary, an improvement is noticed.

Cases of aortic regurgitation uncomplicated have bathed as others have, and, in so far as delcterious effects have been produced, they have been conspicuous by their absence.

Sphygmographic observations.

I have selected one each of the four bruits most commonly met with for the purpose of showing the changes which the sphygmograph has made evident, before and after a course of the baths, and under as nearly as possible the same circumstances of pressure, &c.

Mitral regurgitation.

1. *Mitral Regurgitation.*—On first seeing patient: tracing of low tension, no aortic stenosis, therefore purely due to low pressure in radial. At end of course, one month after, line of ascent more perpendicular, sharper summit, better marked tidal and dicrotic waves; in short, pulse of greater tension.

Mitral stenosis.

2. *Mitral Stenosis.*—This tracing, although manifestly denoting obstruction, did not pre-

sent one of the chief characteristics of mitral obstruction, viz., the irregularity caused by the ventricle contracting upon an insufficient quantity of blood in the cavity, owing to its being obstructed at the mitral orifice; but, as a bruit almost replaced the second sound, it may be that there was some aortic regurgitation denoted by this bruit, which allowed sufficient reflux of blood to make up for the deficiency. Be this as it may, when the patient had a six weeks' course of baths the line of ascent was decidedly improved, longer and more vertical, and both tidal and dicrotic waves more marked.

Aortic stenosis.

3. *Aortic Stenosis.*—Before treatment a short oblique line of ascent, with ill-defined or nearly absent waves in the line of descent. Seven weeks later, line of ascent nearly vertical and longer, summit wave more pointed, and waves in line of descent much more developed. Of course, the improved line of ascent may be accounted for on the ground of compensating hypertrophy, but as the improvement on the line of descent cannot be so accounted for, would

it be unreasonable to assume that what produced the improvement in the one produced it in the other; and what prevented the blood regurgitating, also held good for its onward course?

Aortic regurgitation.

1. *Aortic Regurgitation.*—Pulse at commencement an upright rise; this was the most noticeable feature in the tracing, and an abrupt fall. Eight weeks after, the line of descent was characterized by the considerable shortening from the summit to the tidal wave. Shall I say that this showed that what had previously interfered with the proper closure of the valves had been removed, and apposition effected; if not, what other cause for the improvement?

In following out the observations for these cases, it may be as well to state that there had been no specific therapeutic agent employed, other than that of the Bath waters.

The rapidity with which the cases I have observed have progressed,* and the highly

* "Valvular Diseases of the Heart, with Special Reference to Treatment by the Bath Waters," by Hugh Lane. Published by Wilkinson & Co.

satisfactory manner in which so many have terminated, go far, in my opinion, to prove that the waters, instead of being injurious in cardiac cases, are, on the contrary, accompanied with very beneficial results, and ought to dispel the bugbear which has existed, and yet exists, of the danger associated with the use of the baths in cases of valvular disease of the heart.

Functional bruits.

It seems scarcely applicable to say anything about functional bruits, but since a bruit is frequently met with in the anæmic patients who present themselves for treatment by the baths, with and without history of previous attacks of acute rheumatism, a few words may not be out of place.

On the whole, these patients do very well. Should the case be one, however, of advanced anæmia or chlorosis, or progressive pernicious anæmia, where the muscular fibre of the heart is in a condition of fatty degeneration, and the heart is hypertrophied and dilated, of course much caution should be observed. Patients should not exceed the tepid bath of 98 degrees, which

should always be a reclining bath, and of not more than ten minutes' duration.

Further, in the defective muscular action, which allows of mitral and tricuspid regurgitation, "the functional bruit," and in the altered condition of the blood, which contributes to the pulmonary and aortic murmurs which we meet with in anæmia, do we not see in the Bath waters one of the chemical ingredients of which we give so much, and cast our hopes upon? I refer to the iron. Let the patient drink as well as bathe; let him do his best, under the guidance of his medical adviser, to use and not to abuse the treatment which nature places at his disposal; and I think we shall see that if he adheres to common-sense precautions, whether he have a cardiac bruit from rheumatism, or a functional one from anæmia, the day when he first commenced his course of baths was the day when the disease began to receive a check, and will prove the starting point of a happier future.

CHAPTER VI.

Conclusion.

In conclusion, let me sum up what I believe to be the result of the preceding observations.

I have, to the best of my ability, endeavoured to show—

1. What are the nature and characteristics of the diseases which we are combating, and the marks by which they can be recognized.

2. The methods of treatment by which their ravages are to be met and relieved or neutralized.

And lastly, the ultimate goal of all our investigations and observations—the total eradication of the evil, and the means by which this is to be striven after.

Our enemy is no dream of a disordered or exaggerated fancy; it is a deadly, deter-

mined, and obstinate foe, which gives no quarter and must receive none, but must be met by a war of extermination. We, who are busying ourselves specially with the study of rheumatic diseases, do not seek to arrogate to ourselves the qualifications of him who took part in the immortal pilgrimage to Canterbury of whom it is written that—

> "He knew the cause of every maladye,
> Were it of hoot, or cold, or moyst or drye,
> And where engendered, and of what humour,
> He was a verrey parfight practisour."

I have not, therefore, attempted, as Chaucer's "Doctour of Phisik" might have been justified in doing, to dogmatize on these subjects. I have merely set down the fruits of laborious, and, I trust I may venture to say, to some extent original investigations; and I think it not unreasonable to assert that, from the premises put forward, the conclusions stated have been legitimately reached. In this I have not sought to claim any merit for whatever I may have attempted to contribute to the fuller

discussion of the subject, for I cannot forget that all contributions made towards medical science, and every fresh ray of light cast upon it, are, in the phrase of one of our greatest philosophers, but the picking up of pebbles by the shore of the ocean. If we should succeed in warding off, or postponing indefinitely, the serious results which we all know too well, we should indeed have accomplished a humane feat; if we have not, we can take to ourselves the satisfaction that we have done our best in trying.

And when the great end and aim of all such aspirations as these shall be reached, when the victims of rheumatic diseases, the crippled, the halting, and the deformed, shall no longer crowd our streets, our poor-houses, and our hospitals, we, who have in any way assisted to bring about so beneficial a result, may with confidence claim from posterity, made happier by our efforts, the noble and enduring epitaph—

"Si monumentum quæris, circumspice."

Pardon & Sons, Printers, Wine Office Court, Fleet Street, London, E.C.